

Chameleon Labs

Model 7802

Stereo OPTO TUBE Compressor

Owner's Manual

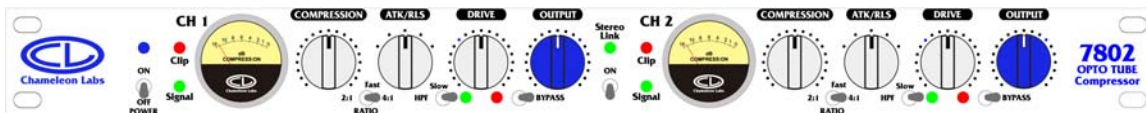
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General Description:

The 7802 is a two channel optical style compressor with a high voltage 12AX7 tube makeup gain stage. The compressor is a feedback type design with two ratio settings, 2:1 and 4:1, and five different attack/release envelope settings.

The 7802 also makes a very good tube line amp when used with little or no compression. The tube circuit is designed to produce primarily even-order harmonic distortion that is very musically “friendly” to most sources.

Features of the Model 7802:

The 7802 is one of the finest audio compressors available. The 7802 was designed and constructed with the absolute best components, assuring a lifetime of quiet, reliable performance.

The 7802 offers:

- Two channel opto-isolator / tube-based compression
- Stereo linkable channels
- Vactrol optical electronics
- Hand selected 12AX7 tubes
- Five position attack/release selector
- Two position ratio switch (2:1 and 4:1)
- HPF switch for compressor side chain

- Drive control to adjust the amount of tube overdrive
- Output control to set the overall output level
- LED metering of input and clip levels
- VU metering of compression
- XLR balanced inputs
- XLR transformer balanced outputs
- External power supply
- One year warranty
- Designed in the USA

Front Panel Controls:

The front panel controls are COMPRESSION, ATK/RLS, DRIVE, OUTPUT controls as well as RATIO, HPF, BYPASS, LINK and POWER switches.

General Note: When a toggle switch is positioned toward the label, it is enabling that function.

The COMPRESSION control sets the compressor threshold. Turning the knob clockwise increases compression. The RATIO switch selects between 2:1 and 4:1 ratios.

The DRIVE control sets the drive level to the tube gain stage, and the OUTPUT control sets the overall output level of the unit.

Operation is similar to that of a guitar amplifier with preamp and master volume controls, allowing the amount of tube saturation to be finely controlled.

The ATK/RLS selector changes both the attack and release time constants of the compressor. The five attack settings are 10mS, 22mS, 32mS, 47mS and 70mS. Release times are proportionately longer and largely program dependant.

The HPF switch activates a 6dB/octave roll off in the compressor sidechain that is 3dB down at 90Hz.

The BYPASS switch activates a hardwired bypass of the unit.

The LINK switch allows the two channels to be linked for stereo operation. During link operation both control circuits feed both channels allowing the unit to operate as a stereo device and neither channel acts as a master controller. Care should be taken to set identical configurations for both channels to ensure balanced stereo operation.

Connecting the Compressor

Audio Connection

Inputs are actively balanced, and are also capable of unbalanced operation. The outputs are transformer balanced, and are capable of driving balanced or unbalanced lines.

Input connections are made with the female XLR connectors on the rear of the unit. This connector is wired with pin 2 HOT, pin 3 common and pin 1 is ground (shield).

Output connection is made using the male XLR connectors on the rear of the unit. This connector is wired with pin 2 HOT, pin 3 common and pin 1 is ground (shield).

If you experience hum when using both output connectors simultaneously, you may have a ground loop. To correct this problem, disconnect the ground wire (pin 1) from the XLR cable plugged into the 7802's output. This interrupts the ground path and breaks the ground loop, which is causing the hum.

AC Power Connection

Your 7802 includes an AC power module type-dependent of your country.

First, connect the AC power module to an electrical outlet. A professional power strip is recommended. Connect the AC power module to the power socket located on the rear panel of the compressor.

First time users

Set up of the Model 7802

Like all tube-based equipment, this product needs to warm up to operating temperature. The 12AX7 tube will reach operating temperature within one to three minutes.

1- The Power switch supplies power to the unit. The 7802 should be powered "on" with monitor levels turned down to protect your speakers from damage due to "thumping".

2- Setting the Compression control is dependent on the input signal. The output from an instrument may be around -20dB, but the level from an insert on a DAW or console might be +15dB. The best way to set the compression control is to start with the control wide open. Slowly turn the control counter-clockwise, lowering the compression until you have the correct amount of compression. Use the compression meter and your ears as a guide to determine the best compression.

3- The Ratio switch selects the "amount" of compression applied to the input signal once that signal reaches the threshold. The 7802 can compress at a ratio of both 2 to 1 and 4 to 1. Use this control to have your program levels either track at that rate of 1 dB for every 2dB of change or 1dB for every 4dB of audio change.

4- The Drive and the Output controls set the character and the output gain of the 7802. Turning up the Output control

adds gain, or make-up gain to the system. Since levels are decreased when compression is used, this control can bring the output signal back up to the same as the input level. To get you started, we have made a blue dot on each of these controls that should be used as unity gain starting points.

5- The Atk/Rls Switch selects the attack and release characteristics. The attack determines how quickly compression is added to the program material. The 7802 sets the release times for you, with the values increasing with the attack settings. The audio program material that you are processing with the compressor will determine the correct, musical release times as well as where you have set the attack control.

6- The Bypass switch allows you to remove the unit from the signal path. When set so that the red LED is illuminated, the unit will pass signal from the input jacks to the output jacks with a hardwired connection inside the unit. The LED will be off to inform you that the 7802 is working on your signal. The Bypass switch is useful to A/B the results of your compressor as well as to achieve unity gain.

7- The Stereo Link Switch will allow your 7802 to be used as either two mono units or one stereo unit. The green LED will light when the switch is in the stereo position.

8- The Compression Meter allows you to see the exact amount of gain that the 7802 is removing from your signal. The range of the meter is 0dB to -18dB.

Specifications

Input impedance: 10k ohms unbalanced

Output impedance: 600 ohms balanced

Maximum output: +20dBu (0dBu = 0.775v)

Gain: 39 dB

Frequency Response: +/- 1 dB from 20Hz to 20 KHz

THD: Not more than 0.6% from 20Hz to 20 KHz output
into 600 Ohms

Equivalent Input Noise (EIN):-98 dBu

Sidechain Highpass: 90 Hz (-3dB, 6dB per Octave)

Dimensions: 19" x 1.75" x 12.25" (482mm x 44.8mm x
311mm)

Shipping weight: 14.4 lbs. (6.5Kg)

Power Requirements: 115VAC, 110 mA.; 230VAC, 55
mA.

Warranty and Liability

Your Chameleon Labs product is warranted to the original owner for a period of one year. Chameleon Labs guarantees this product to be free from electrical and mechanical defects and will repair or replace defective components, or replace the unit at Chameleon Lab's option. Should service be required for your Chameleon Labs product, please contact the manufacturer. Service is provided for products beyond the warranty period. Seller warrants that the goods are described in this agreement, but no other express warranty is made in respect to the goods. The entire risk as to the quality and performance of the good is with the buyer. Seller disclaims all warranties either expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, and seller neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of said goods.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

PURCHASED FROM _____

Please visit www.chameleonlabs.com for the latest updates and technical information.